

FORM PTO/SB/08A/B (10-01) Substitute for PTO-1449A/B	Attorney Docket Number	52298/RRT/B600
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Application Number	To Be Assigned 10822403
	Filing Date	Herewith
	Applicant(s)	Steven T. Jaffe, et al.
	Group Art Unit	To Be Assigned
	Examiner Name	To Be Assigned

U.S. PATENT DOCUMENTS				
EXAMINER INITIALS	Cite No. ¹	DOCUMENT NUMBER Number - Kind Code ² (If Known)	Publication Date MM-DD-YYYY	Name of Patentee
Q		4,677,625	06-30-1987	BETTS, et al.
Q		4,677,626	06-30-1987	BETTS, et al.
Q		4,979,175 A1	12-18-1990	PORTER
Q		5,181,209	01-19-1993	HAGENAUER, et al.
Q		5,349,608	09-20-1994	GRAHAM, et al.
Q		5,406,570	04-11-1995	BERROU, et al.
Q		5,446,747	08-29-1995	BERROU
Q		5,563,897	10-08-1996	PYNDIAH, et al.
Q		5,666,378	09-09-1997	MARCHETTO, et al.
Q		5,675,585	10-07-1997	BONNOT, et al.
Q		5,703,911	12-30-1997	LIN, et al.
Q		5,721,745	02-24-1998	HLADIK, et al.
Q		5,734,962	03-31-1998	HLADIK, et al.
Q		5,742,612 A1	04-21-1998	GOURGUE, et al.
Q		5,761,248	06-02-1998	HAGENAUER, et al.
Q		5,784,300	07-21-1998	NEUMEIER, et al.
Q		5,841,818	11-24-1998	LIN, et al.
Q		5,907,582	05-25-1999	YI
Q		5,933,462	08-03-1999	VITERBI, et al.
Q		5,970,085	10-19-1999	YI
Q		5,978,365	11-02-1999	YI
Q		5,983,384	11-09-1999	ROSS
Q		5,983,385	11-09-1999	KHAYRALLAH, et al.
Q		5,996,104	11-30-1999	HERZBERG

EXAMINER SIGNATURE	<i>Cam Ma</i>	DATE CONSIDERED	7/16/04
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D		6,014,411	01-2000	WANG
D		6,016,568	01-18-2000	WOLF, et al.
D		6,065,147	05-16-2000	PYNDIAH, et al.
D		6,119,264	09-12-2000	BERROU, et al.
D		6,122,763	09-19-2000	PYNDIAH, et al.
D		6,166,667	12-2000	PARK
D		6,182,261 B1	01-30-2001	HALLER, et al.
D		US 2001/0028690 A1	10-11-2001	EBEL, SR.
D		6,304,996 B1	10-16-2001	VAN STRALEN, et al.
D		6,330,277	12-2001	GELBLUM, et al.
D		6,334,197	12-2001	EROZ, et al.
D		6,339,824	01-2002	SMITH, et al.
D		6,339,834	01-2002	CROZIER, et al.
D		6,351,832	02-2002	WEI
D		6,392,572	05-2002	SHUI, et al.
D		6,427,214	07-2002	LI, et al.
D		6,484,283	11-2002	STEPHEN, et al.
D		6,530,059	03-2003	CROZIER, et al.
D		6,574,766	06-2003	OBUCHI, et al.
D		6,693,566	02-2004	JAFFE, et al.

FOREIGN PATENT DOCUMENTS					
EXAMINER INITIALS	Cite No. ¹	FOREIGN PATENT DOCUMENT Country Code ² - Number ³ - Kind Code ⁴ (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶ ()
D		EP 0 843 437 A2	05-20-1998	ADACHI, et al.	
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Q		EP 1 009 098 A1	06-14-2000	BOHNKE	
Q		WO 02/41563 A2	05-23-2002	BASS	
Q		WO 02/19552	03-07-2002	KWENTUS, et al.	
Q		WO 02/37691 A2	05-10-2002	SHEN, et al.	
Q		EP 1 030 457 A2	08-23-2000	GIESE, et al.	
Q		GB 2346782A	08-16-2000	SAGEM SA	
Q		FR 2724522A1	03-15-1996	FRANCE TELECOM	
Q		EP 0 973 292 A2	01-19-2000	FREEMAN	
Q		WO 99/19994 A2	04-22-1999	STURZA, et al.	
Q		EP 0 891 656 B1	09-15-1999	BERROU, et al.	
Q		EP 0 986 181 A2	03-15-2000	MAKARIAN, et al.	
Q		WO 01/43384 A2	06-14-2001	JAFFE, et al.	
Q		WO 02/21702 A1	03-14-2002	CAMERON, et al.	
Q		WO 02/23738 A2	03-21-2002	TRAN, et al.	
Q		WO 02/23739 A2	03-21-2002	TRAN, et al.	
Q		EP 0 940 957 A1	09-08-1999	SHIBUYA, et al.	

OTHER DOCUMENTS		
EXAMINER INITIALS	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
Q		CLARK, G.C., et al.; "Error-Correction Coding for Digital Communications"; Error Correction Coding for Digital Communication; 1981; pages 349-352; XP002131001
Q		SHOEMAKE, Mathew B., et al.; Turbo Codes for High Order Constellations"; Information Theory Workshop; 22 June 1998; pages 6-7; XP010297309; IEEE; USA
Q		WANG, Zhongfeng, et al.; "VLSI Implementation Issues of Turbo Decoder Design for Wireless Applications"; Signal Processing Systems; 20 October 1999; pages 503-512; XP010370879

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D		AGRAWAL, Dakshi, et al.; "On the Phase Trajectories of the Turbo-Decoding Algorithm"; 1999 IMA Summer Program Codes, Systems and Graphical Models; Http://www.comm.csl.uiuc.edu/~dakshi ; 08-03-1999; pages 1-22; XP-002207488
D		BUCKLEY, Michael E., et al.; "The Design and Performance of a Neural Network for Predicting Turbo Decoding Error with Application to Hybrid ARQ Protocols"; IEEE Transactions on Communications; April 2000; pages 566-576; Vol. 48., No. 4; XP-000932188; IEEE
E		EBEL, William J.; "Turbo Code Implementation on the C6x"; Texas Instruments DSPS Fest '99; August 1999; pages 1-13; XP002207490; Houston TX
D		RAJASHEKHARA, T.M.; "Signature Analyzers in Built-In-Self-Test Circuits: A Perspective"; Proceedings of the 1990 IEEE Southern Tier Technical Conference; 25 April 1990; pages 275-281; XP-010010765
D		SHAO, Rose Y., et al.; "Two Simple Stopping Criteria for Turbo Decoding" IEEE Transactions on Communications; 08-08-1999; pages 1117-1120; Vol. 47, No 8; XP-000848102; IEEE
D		WU, Yufei, et al.; "A Simple Stopping Criterion for Turbo Decoding"; IEEE Communications Letters; August 2000; pages 258-260; Vol. 4, No. 8; XP-000959692; IEEE
D		Internet Papers: "Codes, Systems and Graphical Models"; 1999 IMA Summer Program; http://www.ima.umn.edu.csg/ ; August 2-13, 1999; pages 1-6; XP-002207489
D		SCHURGERS C. et al.; "Energy Efficient Data Transfer and Storage Organization for a MAP Turbo Decoder Module"; XP010355952; August 16, 1999, pp. 76-81, ISBN; 1-58113-133-X
D		COLLINS O.M., et al.; "Iterative Decoding of Non-Systematic Turbo-Codes"; 2000 IEEE International Symposium on Information Theory, Sorrento, Italy, June 25-30, 2000; p. 172, ISBN: 0-7803-5857-0.
D		MORLET C., et al.; "A Carrier Phase Estimator for Multi-media Satellite Payloads Suited to RSC Coding Schemes"; IEEE 2000, June 18, 2000, pp. 455-459, vol. 1; ISBN: 0-7803-6283-7
D		PROAKIS J.G.: "Digital Communications" 1991, Modulation and Demodulation for the Additive Gaussian Noise Channel", McGraw-Hill, New York; XP002193198 181370, pp. 234-271.
D		BENEDETTO, S., et al.; "Parallel Concatenated Trellis Coded Modulation", Jet Propulsion Laboratory, California Institute of Technology, 5 pages. May 1980
D		RAMSEY, John L., "Realization of Optimum Interleavers," IEEE Transactions on Information Theory, May 1970, pages 338-345, Vol. IT-16, No. 3.

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<i>Q</i>		UNGERBOECK, Gottfried, :Channel Coding with Multilevel/Phase Signals, " IEEE Transactions on Information Theory, January 1982, pages 55-66, Vol. IT-28, No. 1
<i>Q</i>		BATTAIL, Gerard, et al., "Suboptimum Decoding Using Kullback Principle," in Lecture Notes in Computer Science, 1988, pages 93-101, No. 313, B. Bouchon et al. Eds.
<i>Q</i>		BERROU, Claude, et al., "Near Shannon Limit Error - Correcting Coding and Decoding: Turbo-Codes," IEEE International Conference on Communications '93, Geneva Switzerland, May 23, 1993, pages 1064-1070, Technical Program, Conference Record, Volume 2/3.
<i>Q</i>		MOHER, MICHAEL, "Decoding Via Cross-Entropy Minimization," Proceedings IEEE GLOBECOM Conference, Houston, TX, December 1993, pages 809-813.
<i>Q</i>		DOLINAR, S., ET AL., "Weight Distributions for Turbo Codes Using Random and Nonrandom Permutations," TDA Progress Report 42-122, Jet Propulsion Laboratory, August 1995, pages 56-65.
<i>Q</i>		FAZEL, K., ET AL., "Combined Multilevel Turbo-Code with 8PSK Modulation," Global Telecommunications Conference, 1995. Conference Record. Communication Theory Mini-Conference, GLOBECOM '95. IEEE Singapore, November 13, 1995, pages 649-653.
<i>Q</i>		DIVSALAR, D., ET AL., "Effective Free Distance of Turbo Codes," Electronics Letters, February 29, 1996, pages 445-446, Vol. 32, No. 5.
<i>Q</i>		HAGENAUER, JOACHIM, ET AL., "Iterative Decoding of Binary Block and Convolutional Codes," IEEE Transactions on Information Theory, March 1996, pages 429-445, Vol. 42, No. 2.
<i>Q</i>		BERROU, CLAUDE, "Near Optimum Error Correcting Coding and Decoding: Turbo-Codes," IEEE Transactions on Communications, October 1996, pages 1261-1271, Vol. 44, No. 10.
<i>Q</i>		PIETROBON, STEVEN S., "Implementation and Performance of a Turbo/MAP Decoder," a paper submitted to the International Journal of Satellite Communications, February 21, 1997, rev. December 4, 1997 and April 2, 1998, 45 pages.
<i>Q</i>		ROBERTSON, PATRICK, ET AL., "Bandwidth-Efficient Turbo Trellis-Coded Modulation Using Punctured Component Codes," IEEE Journal on Selected Areas in Communications, February 1998, pages 206-218, Vol. 16, No. 2.

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AD		VITERBI, ANDREW J., "An Intuitive Justification and a Simplified Implementation of the MAP Decoder for Convolutional Codes," IEEE Journal on Selected Areas in Communications, February 1998, pages 260-264, Vol. 16, No. 2.
AD		HSU, JAH-MING, ET AL., "A Parallel Decoding Scheme for Turbo Codes," ISCAS '98. Proceedings of the 1998 IEEE International Symposium on Circuits and Systems, Monterey, CA, May 31, 1998, pages 445-448.
AD		GROSS, W.J., ET AL., "Simplified MAP Algorithm Suitable for Implementation of Turbo Decoders," Electronics Letters, August 6, 1998, pages 1577-1578, Vol. 34, No. 16.
AD		YUE, CHUNG-WAI, ET AL., "On the FER Performance and Decoding Complexity of Turbo Codes," 1999 IEEE 49 th Vehicular Technology Conference, Houston, TX, May 16, 1999, pages 2214-2218.
AD		LANGLAIS, CHARLOTTE, ET AL., "Synchronisation in the Carrier Recovery of a Satellite Link Using Turbo-Codes with the Help of Tentative Decisions," IEE Colloquium. Turbo Codes in Digital Broadcasting - Could It Double Capacity?, November 22, 1999, pages 5/1-7.
AD		KIM, BONGHOE, ET AL., "Reduction of the Number of Iterations in Turbo Decoding Using Extrinsic Information," IEEE TENCON, 1999, pages 494-497.
AD		RICHARDSON, TOM, "The Geometry of Turbo-Decoding Dynamics," IEEE Transactions on Information Theory, January 2000, pages 9-23, Vol. 46, No. 1.
AD		SCHLEGEL, CHRISTIAN, Trellis Coding, 1997, IEEE Press, Piscataway, New Jersey (entire book).
AD		HEEGARD, CHRIS, ET AL., Turbo Coding, 1999, Kluwer Academic Publishers, Norwell, Massachusetts (entire book).
AD		VUCETIC, BRANKA, ET AL., Turbo Codes Principles and Applications, 2000, Kluwer Academic Publishers, Norwell, Massachusetts (entire book).
AD		SKLAR, BERNARD, Digital Communications Fundamentals and Applications, Second Edition, 2001, Prentice Hall PTR, Upper Saddle River, New Jersey (entire book).

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